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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,220	01/31/2005	Oscar Julian Sanchez Ferreras	P/189-329	1822

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OSTROLENK FABER GERB & SOFFEN  
1180 AVENUE OF THE AMERICAS  
NEW YORK, NY 100368403

EXAMINER
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KIM, WESLEY LEO

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/502,220

Applicant(s)

SANCHEZ FERRERAS ET AL.

Examiner

Wesley L. Kim

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 21 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/21/04.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 1, 3, 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Joss et al (U.S. Patent 6684073 B1) in view of McCombe (GB 2280085 A).

Regarding Claim 1, Joss teaches A system for detecting the access of one or more mobile subscribers, belonging to a home network (1) (Fig.1:H) for mobile telephony, to a foreign network (3) (Fig.1:V) for mobile telephony (Col.1:33-39, subscriber data comprise information on whereabouts for a respective subscriber), and for storing information indicative thereof (Col.1:33-39, stored in HLR), the foreign network for mobile telephony connected to the home network (1) through a gateway (2) (Fig.1:3 and Col.5:14-16 (conversion device)), said gateway being arranged to provide communication with the mobile subscriber accessing the respective foreign network (3) and to provide for the transmission between the foreign network (3) and the home network (1) (Col.7:26-34, converts data from one network into the appropriate protocol data units so the data may be forwarded to another network), of signaling parameters including an indication of mobile subscribers entering/exiting the foreign network (3) (Col.11:6-13), as well as data regarding the foreign network (3)(Col.9:30-31

and Col.9:40-42, the network unit number, i.e. VLR-V, is information regarding the foreign network and is sent to the home network via the gateway) and data regarding the mobile subscriber (Col.9:30-36, IMSI), the home network (1) being arranged to activate an indication that said mobile subscriber is in the foreign network in response to said signaling parameters (Col.1:44-48 activates a call forwarding to the foreign network); characterized in that the system comprises processing means (4), connected between the gateway (2) and the home network (1) (Fig.1:4, HLR), said processing means (4) being arranged to detect, on the basis of information circulating through the gateway (2), the signaling parameters including the indication of entrance/exit of the one or more mobile subscribers in/from the respective foreign network (Col.11:6-13), the data regarding the foreign network and the data regarding the mobile subscriber (Col.9:30-31 and Col.9:40-42, the network unit number, i.e. VLR-V, is information regarding the foreign network and is sent to the home network via the gateway), said storage means (7) being arranged to store data identifying the subscribers entering/exiting a foreign network (Col.11:6-13), the data regarding the foreign network and the data regarding the mobile subscribers in the foreign network (Col.9:30-40 VLR-V and IMSI), these parameters providing the system with information on which mobile subscribers are visiting a foreign network and which foreign network each mobile subscriber is in (Col.9:30-40), however the combination **is silent on** the foreign network being one of a plurality of foreign networks (3), the processing means further being arranged to separate and send

these data to analysis means (6) provided in the system for analyzing the data, and the system being arranged to provide contracted services to the mobile subscribers in the foreign networks.

McCombe teaches the foreign network being one of a plurality of foreign networks (Pg.10:4-10, A, B, C) and McCombe further teaches the system being arranged to provide contracted services to the mobile subscribers in the foreign networks (Pg.19:9-11).

Joss teaches that the VLR transmits to the HLR a roaming number, which is used by the HLR for forwarding calls to the respective mobile communications terminal in the VPLMN (Col.1:44-48). To the examiner this reads on the claim and it is obvious there exists a processing means which separates the data received and sends the data (i.e. roaming number, IMSI, VLR-V) to an analysis means (i.e. it is well known that a CPU is in an HLR and CPU's have analytical capabilities) provided in the system for analyzing the data since the data must be organized in some fashion and then analyzed so that calls may be routed to the correct mobile station in the correct foreign network.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Joss, such that the foreign network being one of a plurality of foreign networks (3), the processing means further being arranged to separate and send these data to analysis means (6) provided in the system for analyzing the data, and the system being arranged to provide contracted services to the mobile subscribers in the foreign networks, to provide a method of

allowing a subscriber of a home network to make and receive calls from a foreign network and be billed by the home network as opposed to the foreign network, which would require the use of a new phone number.

Regarding Claim 3 and 8, the combination as taught above teaches all the limitations as recited in claim 1 and claim 2, respectively, however the combination **is silent on** an event-based service module (9) connected to an event generator (11) and arranged so that when the event generator (11) generates a service for subscribers located in foreign networks, the event-based service module (9) accesses the storage means (7) to obtain the information on which subscribers are located in foreign networks (3).

Joss teaches that calls are forwarded to the respective mobile phone in the respective foreign network (Col.1;44-48). To the examiner this reads on the claim, since one of ordinary skill in the art would find it obvious that the CPU within the HLR will access from the HLR storage (i.e. access data from the storage) means the information necessary to forward the call (i.e. generate a service) to the appropriate mobile phone and appropriate foreign network. It is obvious that there exists some sort of event generator and event based module for accessing data from the storage means and for generating a service.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Joss, such that an event-based service module (9) is connected to an event generator (11) and arranged so that when the event generator (11) generates a service for subscribers located in foreign networks,

the event-based service module (9) accesses the storage means (7) to obtain the information on which subscribers are located in foreign networks (3), to provide services to said subscribers in the foreign network.

2. Claim 2, 5-7, 9, 10, 12-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Joss et al (U.S. Patent 6684073 B1) and McCombe (GB 2280085 A) in further view of Nilsson (WO 01/10109 A2).

Regarding Claim 2, Joss and McCombe teach all the limitations as recited in claim 1, however the combination **is silent on** wherein the analysis means (6) are connected to a real time service module (8) and arranged to inform said real time service module (8) every time the analysis means detect an entrance/exit of a subscriber in a foreign network, in order to make it possible for the real time service module (8) to immediately provide real time services to the subscribers in a foreign network.

Nilsson teaches that a MAP protocol enables real time transfer of charging related information (Pg.6;7-9) and Joss teaches that the Home network (which was taught to have an Analysis means in the rejection of claim 1) has a MAP-PDU-H2 data unit (Col.10;23-26 and Fig.2, i.e. real-time module) connected to it.

Nilsson further teaches that it is possible to monitor the charging related activities of roaming subscribers (Col.6;10-11). To one of ordinary skill in the art it is obvious that the analysis means must inform the real time service module every time it detects an entrance/exit of a subscriber in a foreign network to monitor charging related activities in real time.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Joss and McCombe, such that the analysis means (6) are connected to a real time service module (8) and arranged to inform said real time service module (8) every time the analysis means detect an entrance/exit of a subscriber in a foreign network, in order to make it possible for the real time service module (8) to immediately provide real time services to the subscribers in a foreign network, to provide a method of keeping track of the location of users and reducing the chance of fraud by roaming subscribers.

Regarding Claim 5, the combination as discussed above teach all the limitations as recited in claim 2, however the combination **is silent on** upon detecting an entrance of a subscriber into a foreign network, said analysis means consider that the subscriber has entered into a foreign network, storing this information in the storage means (7), updating the current subscriber location and communicating this to the real time service module (8).

Nilsson teaches the HLR maintains a record of all the subscribers all the home network (Pg.2:22-24) and the HLR sending a subscriber update message to the VLR (Pg.5:16-18). To the examiner it is obvious that the entrance of the subscriber is detected by the analysis means upon registration of the terminal (Pg.5:4-14) and this information must be communicated to the real time service module in order to provide real time services (Pg.2:11-13 and Pg.6:8-9).

Regarding Claim 6, the combination as discussed above teach all the limitations as recited in claim 2, however the combination **is silent on** the



analysis means (6) are arranged so that when said analysis means detect an exit of a subscriber from a foreign network (3), the analysis means (6) verify whether notification has been received that the subscriber has entered into another foreign network (3), the analysis means further being arranged so that: if the result of the verification is affirmative, the analysis means consider that the subscriber has entered into another foreign network, storing this information and updating the current subscriber location in the storage means (7), and communicating this to the real time service module (8); whereas if the result of the verification is negative, the analysis means consult the home network (1) to verify whether the subscriber has again entered the home network, and if an affirmative response is obtained, the analysis means eliminate the corresponding entry in the storage means (7) and report this to the real time service module.

Nilsson teaches that an HLR maintains a record of all the subscribers of the home network (Pg.4, i.e. directory number, current location, profile information) and to one of ordinary skill in the art, it is obvious that if a subscriber roams out of the home region then the HLR's analysis means (i.e. CPU) determines if a subscriber has roamed into a foreign network. If a subscriber has roamed into a foreign network the analysis means will receive an affirmation from the VLR of the visited system however if the subscriber cannot be found (i.e. the subscriber got on a plane and turned off the phone) the analysis means will receive no affirmation (i.e. a negative verification) so therefore the HLR will check all possible locations where the phone may be, (i.e. home network). If the user is

found the HLR will update its records (Pg.5;4-22) to keep an accurate record of all the subscribers of the home network (Pg.4;21-24).

Regarding Claims 7, 10, and 14, Joss and McCombe teach all the limitations as recited in claim 1, claim 3, and claim 8, respectively, however the combination **is silent on** wherein the storage means (7) are arranged to store a log of all the visits made by each subscriber to the foreign networks so as to permit consultation thereof by other systems.

Nilsson teaches an HLR maintaining a record of all subscribers of the home network (Pg.4;22-24). It is obvious that a log of a subscriber in a foreign network is kept.

McCombe teaches one HLR accessing subscriber information from another HLR (Pg.14;19-24) so it is obvious that the storage means containing a log of visits made by each subscriber to the foreign network is consulted by other systems.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Joss and McCombe, such that storage means (7) are arranged to store a log of all the visits made by each subscriber to the foreign networks so as to permit consultation thereof by other systems, to provide a method of accessing information that is already available to processing calls more quickly.

Regarding **Claims 9, 12, and 13**, Joss, McCombe, and Nilsson teach all the limitations as recited in claim 2, claim 5 and claim 6, and Nilsson further

teaches an HLR maintaining a record of all subscribers of the home network (Pg.4;22-24). It is obvious that a log of subscribers in foreign networks are kept, however the combination **is silent on** wherein the storage means (7) are arranged to store a log of all the visits made by each subscriber to the foreign networks so as to permit consultation thereof by other systems.

Nilsson teaches McCombe teaches one HLR accessing subscriber information from another HLR (Pg.14;19-24) so it is obvious that the storage means containing a log of visits made by each subscriber to the foreign network is consulted by other systems.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Joss, McCombe, and Nilsson, such that storage means (7) are arranged to store a log of all the visits made by each subscriber to the foreign networks so as to permit consultation thereof by other systems, to provide a method of accessing information that is already available to processing calls more quickly.

3. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Joss et al (U.S. Patent 6684073 B1) and McCombe (GB 2280085 A) in further view of Yamaguchi et al (U.S. Patent 6002931).

Regarding Claim 4, Joss and McCombe teach all the limitations as recited in claim 1, however the combination **is silent on** the storage means (7) are arranged to contain data regarding features of each foreign network (3), in order to make it possible for the system to determine which network different received

data belong to, and to adapt the contracted services to the features of the foreign network in which the subscriber is located.

Yamaguchi teaches an HLR of a home network keeping a database record for network identities of visited networks (Col.1:44-48) and Yamaguchi further teaches retrieving data of the visited network and establishing a traffic channel in accordance with the results (Col.1:64-Col.2:5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Joss and McCombe, such that the storage means (7) are arranged to contain data regarding features of each foreign network (3), in order to make it possible for the system to determine which network different received data belong to, and to adapt the contracted services to the features of the foreign network in which the subscriber is located, to provide a method of successfully providing the appropriate services for subscribers roaming in different networks.

4. Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Joss et al (U.S. Patent 6684073 B1), McCombe (GB 2280085 A), and Yamaguchi et al (U.S. Patent 6002931) in further view of Nilsson (WO 01/10109 A2).

Regarding Claim 11, Joss, McCombe, and Yamaguchi teach all the limitations as recited in claim 4, however the combination **is silent on** wherein the storage means (7) are arranged to store a log of all the visits made by each subscriber to the foreign networks so as to permit consultation thereof by other systems.

Nilsson teaches an HLR maintaining a record of all subscribers of the home network (Pg.4;22-24). It is obvious that a log of a subscriber in a foreign network is kept.

McCombe teaches one HLR accessing subscriber information from another HLR (Pg.14;19-24) so it is obvious that the storage means containing a log of visits made by each subscriber to the foreign network is consulted by other systems.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Joss, McCombe, and Yamaguchi such that storage means (7) are arranged to store a log of all the visits made by each subscriber to the foreign networks so as to permit consultation thereof by other systems, to provide a method of accessing information that is already available to processing calls more quickly.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley L. Kim whose telephone number is 571-272-7867. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WLK



**WILLIAM TROST**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**